

Application No. 10/771,797  
Response dated: July 19, 2006  
Reply to Final Office action of May 19, 2006

### **REMARKS**

In response to the Final Office Action dated May 19, 2005, Applicants respectfully request reconsideration based on the above claim amendments and the following remarks, submitted concurrently with a Request for Continued Examination. Applicants respectfully submit that the claims as presented are in condition for allowance.

Claims 1-19 were previously pending in the present Application, with claims 18-19 withdrawn from further consideration. Claims 1-17 remain for consideration upon entry of the present amendments and following remarks. Support for the claim amendments can at least be found in the specification, the figures, and the claims as originally filed.

No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

### **Claim Rejections Under 35 U.S.C. §102**

Claims 1-13 remain rejected under 35 U.S.C. §102(b), (e) as being anticipated by Figs. 1 and 2 of Applicants' cited prior art and/or Kim et al. (U.S. Patent Publication No. 2003/0090614) for the reasons stated on pages 2-3 of the Detailed Action.

In response to the arguments presented in the Amendment filed April 13, 2006, the Examiner specifically states that the second control signal of Applicants' prior art (junction of Q6 and Q7) varies between  $V_{dd}$  and ground in response to the first control signal, and therefore the limitation of "the second control signal swings between first and second voltage levels" is fully met. The Examiner further indicates (as to Kim) that the second control signal (N4) varies between  $V_{dd}$  and ground in response to the first control signal, again meeting the limitation of "the second control signal swings between first and second voltage levels."

Accordingly, claim 1 has been amended as set forth above to more particularly point out that the first voltage level is configured to exceed the threshold voltage level of the pull-down part that is increased due to deterioration thereof. Furthermore, given the apparent withdrawal of the §112, second paragraph rejections to claims 14-17 (reciting a deterioration compensation part that implements the claimed limitation of the first voltage level exceeding the threshold level of

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the pull down-part), Applicants note that there are no outstanding §102 or §103 rejections thereto.

As previously indicated, the conventional 7-transistor shift register stage of the prior art does not provide a pulsed AC signal to the gate of the pull-down transistor Q2. In particular, the rising threshold voltage (over time) of Q2 in the conventional design will eventually reach a level that equals the maximum voltage of the direct current (DC) control signal (VON) externally applied thereto, as is explained in the background section of the application and illustrated by Figure 4 of the application. Moreover, the presently claimed shift register now specifically recites that the first voltage level is configured to exceed the threshold voltage level of the pull-down part (e.g., Q2) that is otherwise increased due to deterioration thereof. No such deterioration compensation mechanism exists in any of the cited references of record.

Accordingly, Applicants respectfully submit that the present rejection of claims 1-13 under § 102(b), (e) have been overcome, and that the same be withdrawn.

#### **Double Patenting**

Claims 1-17 remain provisionally rejected over claims 1-20 of Application No. 10/454,331 (now issued U.S. Patent 7,038,653, as of May 2, 2006) under the judicially created doctrine of non-statutory double patenting, for the reasons stated on pages 3-4 of the Detailed Action. Applicants respectfully traverse.

In response to the arguments presented in the response of April 13, 2006, the Examiner specifically states that claim 1 of the '331 application (now '653 patent) recites "the first pull down driving section to output the second control signal in response to turn on of the pull up section and a second pull down driving section to turn off the pull down section in response to a front edge of an input signal and to turn on the pull down section in response of the second control signal" suggests that the second control signal varies between VON (Vdd) and Voff (ground).

However, even if this were the case, the claims of the '653 patent still do not provide for the deterioration compensation portion of the pull-down driver that includes a second control signal that swings between first and second voltage levels in association with an input voltage

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signal, wherein the first voltage level is configured to exceed the threshold voltage level of the pull-down part (e.g., Q2) that is otherwise increased due to deterioration thereof. Therefore, for at least the reasons indicated in the above discussion of the §102 rejections, the claims of the present application are patentably distinct from U.S. Patent 7,038,653.

Reconsideration and withdrawal of the non-statutory double patenting rejection of claims 1-17 is thus respectfully requested.

**Conclusion**

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

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